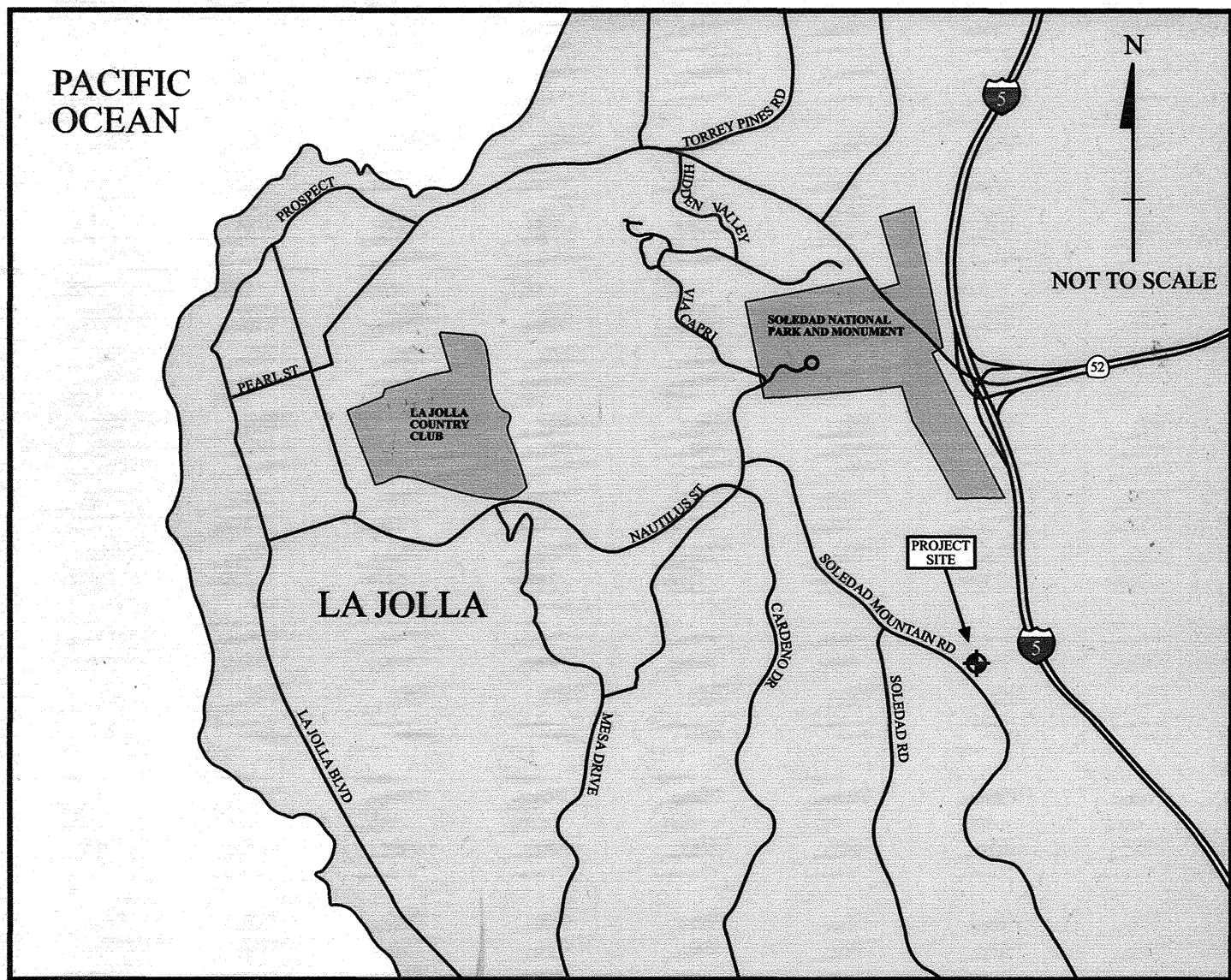


AS-BUILT CONSTRUCTION AND GRADING PLANS FOR: SOLEDAD MOUNTAIN ROAD AND DESERT VIEW DRIVE ALLEY EMERGENCY REPAIR



VICINITY MAP
NOT TO SCALE

PROJECT OUTLINE

THE REPAIRS TO SOLEDAD MOUNTAIN ROAD AND DESERT VIEW DRIVE ALLEY WERE COMPLETED IN 3 SEPARATE PHASES AS OUTLINED BELOW.

THE PHASE 1 REPAIR CONSISTED OF 40 CAST-IN-DRILLED HOLE, 54-INCH DIAMETER, REINFORCED CONCRETE SHEAR PINS (UP TO 81 FEET IN LENGTH). THE SHEAR PINS HAVE BEEN DESIGNED BASED ON A STATIC LONG TERM FACTOR OF SAFETY OF 1.5.

THE PROJECT IS LOCATED IN SEISMIC ZONE 4 AND WITHIN THE ROSE CANYON FAULT ZONE (RCFZ). A HIGH GROUND ACCELERATION IS POSSIBLE RESULTING FROM A MAXIMUM MOMENT MAGNITUDE EARTHQUAKE ON THE RCFZ. A REPAIR DESIGN USING PSEUDOSTATIC SEISMIC ANALYSIS FOR THIS HIGH GROUND ACCELERATION WAS CONSIDERED IMPRACTICAL, THUS THE REPAIRS INCORPORATED A DESIGN STATIC FACTOR OF SAFETY OF 1.5 ONLY.

DESIGN DEAD LOADS (LATERAL LOADS) FOR SHEAR PINS ARE BASED ON SLOPE STABILITY ANALYSIS USING THE PC STABL COMPUTER PROGRAM AND THE REQUIRED HORIZONTAL LOAD (AFTER GRADING) TO ACHIEVE A MINIMUM FACTOR OF SAFETY OF 1.5.

THE PHASE 2 REPAIR CONSISTED OF THE REMOVAL OF 120 TO 200 LINEAL FEET OF LANDSLIDE DEBRIS WITHIN THE SOLEDAD MOUNTAIN ROAD RIGHT-OF-WAY. LANDSLIDE DEBRIS WAS REMOVED AND EXPORTED OFFSITE. IMPORTED, SELECT FILL MATERIALS WITH GEOGRID AND GEOFABRIC REINFORCEMENT WAS BE USED TO RESTORE PRE-LANDSLIDE ROAD GRADES. FILL MATERIALS WERE COMPACTED TO A MINIMUM OF 90% RELATIVE COMPACTION. SUBDRAINAGE WAS INSTALLED TO IMPROVE SUBSURFACE DRAINAGE WITHIN THE AREA OF WORK.

THE REPAIR UTILIZED CAST-IN-DRILLED HOLE REINFORCED CONCRETE SHEAR PINS TO PROVIDE STABILITY ALONG EXCAVATION MARGINS. IN ADDITION TO THESE SHEAR PINS (PREVIOUSLY INSTALLED PER OTHER PLANS), THE REPAIR ALSO INCLUDED PLACEMENT OF GEOGRID REINFORCEMENT AND SHORING FOR TEMPORARY AND LONG-TERM EXCAVATION STABILITY, AS ILLUSTRATED HEREIN. THE COMPLETED REPAIR AREA (SOLEDAD MOUNTAIN ROAD RIGHT-OF-WAY ONLY) INDICATES A STATIC FACTOR OF SAFETY OF 1.5 FOR DEEP SEATED STABILITY.

THE PHASE 3 REPAIR CONSISTED OF THE INSTALLATION OF 44 72-INCH DIAMETER, CAST-IN-DRILLED HOLE, REINFORCED CONCRETE SHEAR PINS 72 AND 80 FEET IN LENGTH. THESE SHEAR PINS WERE INSTALLED SUB-PARALLEL TO DESERT VIEW DRIVE ALLEY ACROSS THE TOE OF THE SOLEDAD MOUNTAIN ROAD LANDSLIDE THAT OCCURRED ON 10/3/07, WHICH BLOCKED VEHICLE ACCESS TO THE SOUTHERN PORTION OF DESERT VIEW DRIVE ALLEY.

FOLLOWING INSTALLATION OF SHEAR PINS, LANDSLIDE DEBRIS WAS REMOVED EAST OF THE SHEAR PINS AND THE LOWER PORTION OF THE SLOPE WAS RESTORED USING GEOGRID REINFORCED, ENGINEERED FILL. THE DESERT VIEW DRIVE ALLEY ALIGNMENT WAS RESTORED TO ITS ORIGINAL GRADE AND A SUBDRAIN SYSTEM WAS INSTALLED TO IMPROVE DRAINAGE AT THE TOE OF THE LANDSLIDE, OUTLETTING ALONG DESERT VIEW DRIVE.

THE REMAINING SLOPE AREA BETWEEN THE SHEAR PINS AND SOLEDAD MOUNTAIN ROAD WAS REGRADED TO A 3:1 SLOPE. THE COMPLETED REPAIR AREA (DESERT VIEW DRIVE ALLEY ONLY) INDICATES A STATIC FACTOR OF SAFETY OF 1.5 FOR DEEP SEATED STABILITY.

CONSTRUCTION CHANGE TABLE		
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS
△	7/7/2008	REVISED SHEETS 5,7,8,9,11,12,14 AND ADDED SHEETS 16-18
△	8/18/2008	ADDED SHEETS 19
△	8/26/2008	REVISED SHEET 11, ADDED SHEET 20
△	1/19/2009	ADDED SHEETS 41-42
△	5/11/2009	ADDED SHEET 43
△	5/21/2009	ADDED SHEET 44, REVISED SHEET 24

SHEET INDEX

- AS-BUILT TITLE SHEET AND NOTES
- AS-BUILT CONSTRUCTION PLANS FOR: SOLEDAD MOUNTAIN ROAD EMERGENCY REPAIR (EAST SIDE SHORING) - PHASE 1
- TITLE SHEET AND NOTES
- EAST SIDE SHORING PLAN AND ELEVATION
- ADDITIONAL NOTES

AS BUILT GRADING PLANS FOR: SOLEDAD MOUNTAIN ROAD EMERGENCY REPAIR - PHASE 2

- TITLE SHEET AND NOTES
- AS-BUILT FINISHED SUBGRADE PLAN
- SLOT/CUT SEQUENCE PLAN
- EXCAVATION PLAN
- ENGINEERING CROSS-SECTIONS AND DETAILS
- ENGINEERING CROSS SECTIONS
- GEOGRID REINFORCEMENT LAYOUT (PLAN VIEW)
- ENGINEERING CROSS-SECTIONS (GEOGRID LAYOUT)
- SHORING PLAN: ELEVATIONS AND DETAILS
- SPECIAL INSPECTION NOTES
- REV. SLOT/FILL PLAN AND E. SIDE SHORING ELEV.
- REV. EXCAVATION PLAN, SECTION 2-2' AND GEOGRID INSTALLATION DETAIL
- REV. GEOGRID SECTION 2-2' AND STRUCTURAL DETAILS
- TEMPORARY GROUND CONFIGURATION AT E. SIDE SHORING
- REV. GEOGRID REINFORCEMENT LAYOUT (PLAN VIEW)

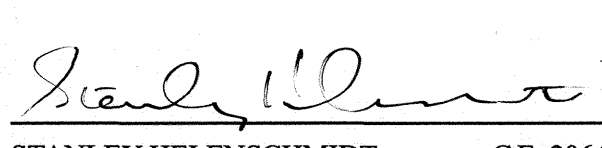
AS-BUILT CONSTRUCTION AND GRADING PLANS FOR: DESERT VIEW DRIVE ALLEY EMERGENCY REPAIR - PHASE 3

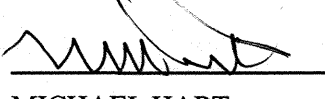
- TITLE SHEET AND NOTES
- AS-BUILT FINISHED GRADES AND SURVEYING NOTES
- SURVEY STAKING AS-BUILT FINISHED GRADE SHEET
- EXCAVATION PLAN AND DETAILS
- SURVEY STAKING EXCAVATION SHEET
- LIMITS OF PERMANENT GEOGRID INSTALLATION
- ENGINEERING CROSS SECTIONS
- SHEAR PIN LAYOUT
- DESERT VIEW DRIVE ALLEY SHEAR PIN DESIGN DETAIL (#77-#120) AND DESERT VIEW DRIVE ALLEY SHEAR PINS (ELEVATION)
- CONSTRUCTION ACCESS PLAN (PHASE 1 AND 2)
- CONSTRUCTION STAGING AREA (EL. 425) PHASE 1 AND 2 AND CRANE FOOTING DETAIL
- SURVEY STAKING CONSTRUCTION ACCESS PLAN (PHASE 1) SHEET
- SURVEY STAKING CONSTRUCTION ACCESS PLAN (PHASE 2) SHEET
- ENGINEERING CROSS SECTIONS FOR CONSTRUCTION ACCESS
- SPECIAL INSPECTION AND GEOGRID REINFORCEMENT NOTES
- CONSTRUCTION ACCESS PLAN (PHASE 2 AND 3)
- DESERT VIEW DRIVE ALLEY TEMPORARY CIDH PIN DESIGN DETAIL
- REVISED FINISHED GRADES - BROW DITCH
- AS-BUILT FINISHED GRADES WITH DRAINAGE DETAILS

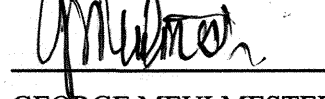
AS-BUILT SOLEDAD MOUNTAIN ROAD EMERGENCY REPAIR SEWER & WATER

- SOLEDAD MOUNTAIN ROAD EMERGENCY REPAIR SEWER PLANS
- SOLEDAD MOUNTAIN ROAD EMERGENCY REPAIR SEWER PLANS
- SOLEDAD MOUNTAIN ROAD EMERGENCY REPAIR SEWER PLANS
- SOLEDAD MOUNTAIN ROAD EMERGENCY REPAIR CURB PROFILE
- DESERT VIEW DRIVE ALLEY EMERGENCY REPAIR CURB PROFILE
- SOLEDAD MOUNTAIN ROAD EMERGENCY REPAIR DRAINAGE PLANS

THESE CONSTRUCTION AND GRADING PLANS HAVE BEEN REVIEWED BY THE UNDERSIGNED AND FOUND TO BE IN CONFORMANCE WITH THE RECOMMENDATIONS AND SPECIFICATIONS CONTAINED IN THE REFERENCED GEOTECHNICAL REPORTS PREPARED FOR THIS PROJECT.


STANLEY HELENSCHMIDT G.E. 2064 DATE 7-1-10
HELENSCHMIDT GEOTECHNICAL, INC.
PHONE (760) 579-0333


MICHAEL HART C.E.G. 706 DATE 7-1-10
CONSULTING ENGINEERING GEOLOGIST
PHONE (619) 992-3161

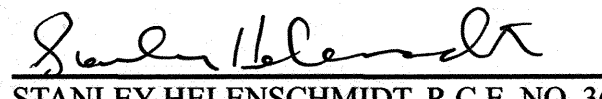

GEORGE MEULMESTER R.C.E. 14330 DATE 7-1-10
CONSULTING ENGINEER
PHONE (619) 582-5961

FOR SOIL FILE SEE CITY RECORD S-_____

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR THE PROJECT DESIGN.


STANLEY HELENSCHMIDT, R.C.E. NO. 36570 DATE 7-1-10

OWNER/APPLICANT

CITY OF SAN DIEGO
9485 AERO DRIVE, SAN DIEGO, CA 92123
TEL.: (858) 627-3200

LEGEND

AS-BUILT IMPROVEMENTS

IMPROVEMENT	STANDARD DWGS
54-INCH DIAMETER SHEAR PIN	
72-INCH DIAMETER SHEAR PIN (72' LONG)	
72-INCH DIAMETER SHEAR PIN (80' LONG)	
AS-BUILT FINISHED SUBGRADE CONTOUR - 1 FOOT INTERVAL	
FINISHED GRADE CONTOUR - 5 FEET INTERVAL	
LIMITS OF EXCAVATION (SOLEDAD MOUNTAIN ROAD GRADING)	
LIMIT OF WORK AREA	
TOP OF TEMPORARY CUT/FILL SLOPE (SOLEDAD MOUNTAIN ROAD GRADING)	
LIMIT OF CUT	
REMOVAL DEPTH (CUT) CONTOUR - 5 FEET INTERVAL	
TOP OF SLOPE	
BOTTOM OF SLOPE	
6 INCH PVC, SCHEDULE 40, TIGHTLINE DRAIN, ARROW INDICATES DIRECTION OF FALL, 2% MIN.	
6 INCH PVC, SCHEDULE 40, PERFORATED DRAIN, PERFORATIONS DOWN. ARROW INDICATES DIRECTION OF FALL, 2% MIN.	
SEWER MAIN	
WATER MAIN	
STRAIGHT HEADWALL-TYPE B	D-32
CURB OUTLET - TYPE A (ANGLE 45° IN DIRECTION OF FLOW)	D-25
CATCH BASIN - TYPE F	D-7
BROW DITCH - TYPE D	D-75

PROJECT CONSULTANTS

HELENSCHMIDT GEOTECHNICAL, INC.
5245 AVENIDA ENCINAS, SUITE B, CARLSBAD, CA 92008

CONTACT: STAN HELENSCHMIDT
TEL.: (760) 579-0333

GEORGE MEULMESTER
PROFESSIONAL ENGINEER
7109 HORNER STREET, SAN DIEGO, CA 92120

CONTACT: GEORGE MEULMESTER
TEL.: (619) 582-5961

TEMPORARY INSTALLATION

IMPROVEMENT

K-RAIL
(PER STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION TEMPORARY RAILING (TYPE K) "STANDARD PLANS FOR CONSTRUCTION OF LOCAL STREETS AND ROADS")

EXISTING IMPROVEMENTS

ITEM

42-INCH DIAMETER SHEAR PIN (NOT PART OF THIS CONSTRUCTION)
48-INCH DIAMETER SHEAR PIN (NOT PART OF THIS CONSTRUCTION)

EXISTING CONTOUR - VARYING INTERVALS

PROPERTY LINE

SPECIFICATION NO. 4200
CIP/SAP S-00932 & S-00979

CONSTRUCTION AND GRADING PLANS FOR: SOLEDAD MOUNTAIN ROAD AND DESERT VIEW DRIVE ALLEY EMERGENCY REPAIR

5700 BLOCK, SOLEDAD MOUNTAIN ROAD
5700 BLOCK, DESERT VIEW DRIVE (ALLEY)

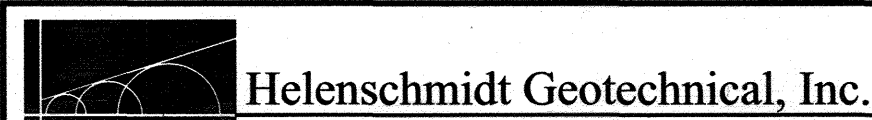
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 1 OF 50 SHEETS

992019 &
528051
W.O. NO. S-00932.07.03

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL (1)	HGI		3/13/08	
ORIGINAL (2)	HGI		5/19/08	
ORIGINAL (3)	HGI		10/16/08	
AS-BUILT	HGI		7/1/10	

CONTRACTOR: HAZARD CONST. CO. DATE STARTED: 10-31-07
INSPECTOR: NICK MANANALA DATE COMPLETED: 6-09

34701-01-D



5245 Avenida Encinas, Suite B
Carlsbad, California 92008

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AS-BUILT